



# Configuration Audit Root Cause Analysis Status

March 12, 2002



# Audit Origins

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- Reinstituted SCLSIS Audits in Direct Response to Fleet Concerns
  - Integrated Ships Maintenance Supply Readiness (ISMSR) Working Group 4
  - Fleet Maintenance Executive Steering Council
- Goal: Fleet Visibility of Overall Configuration Management (CM) Health
  - Identify Root Causes of Configuration Discrepancies
  - Fix the Process (the Causes) not the Symptoms



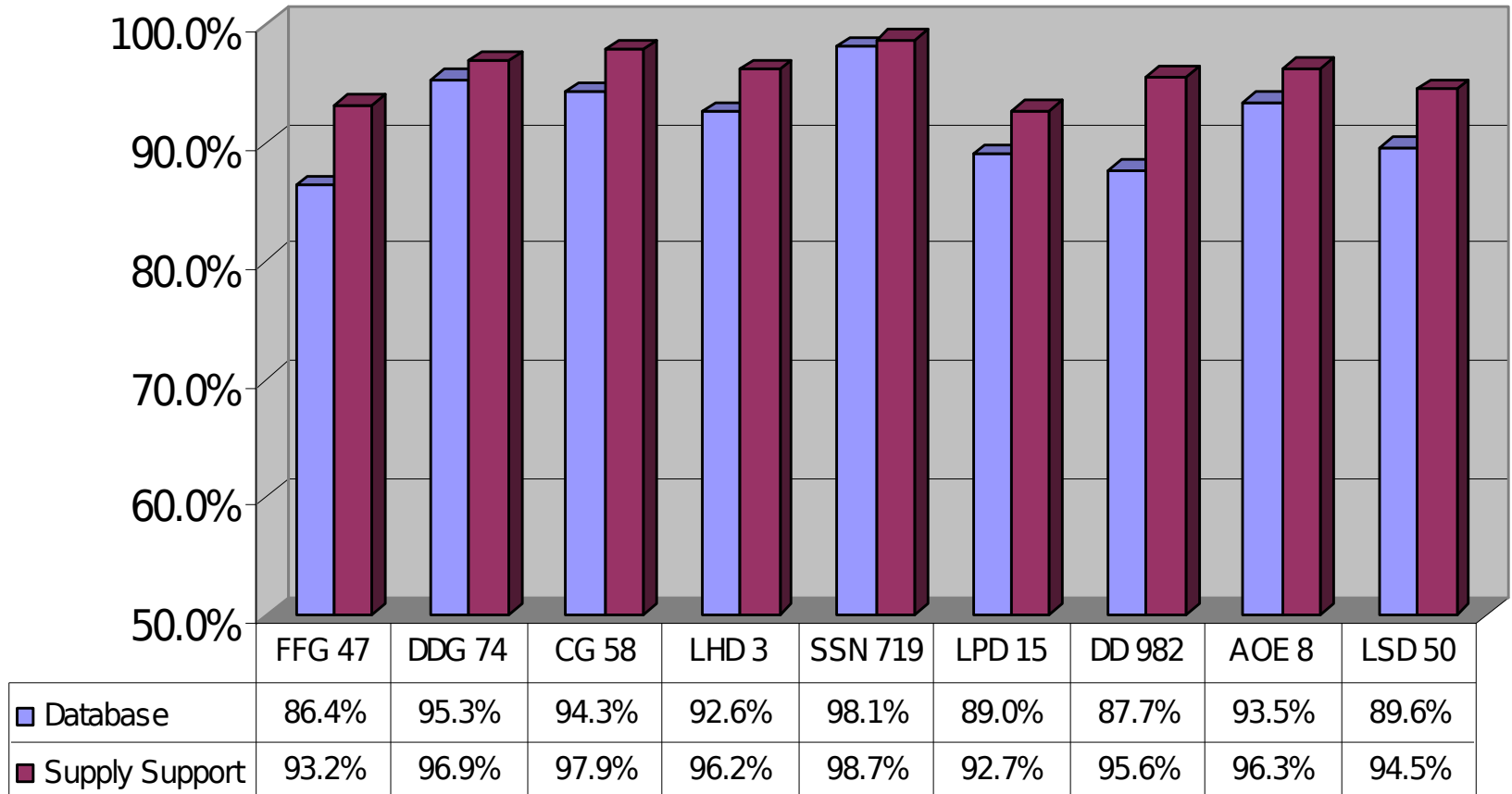
# Overview

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- Compiled results of Enterprise BG
  - Available for trending
- Performed audits on Stennis BG
  - 4 ships completed prior to deployment



# Enterprise BG Configuration Accuracy

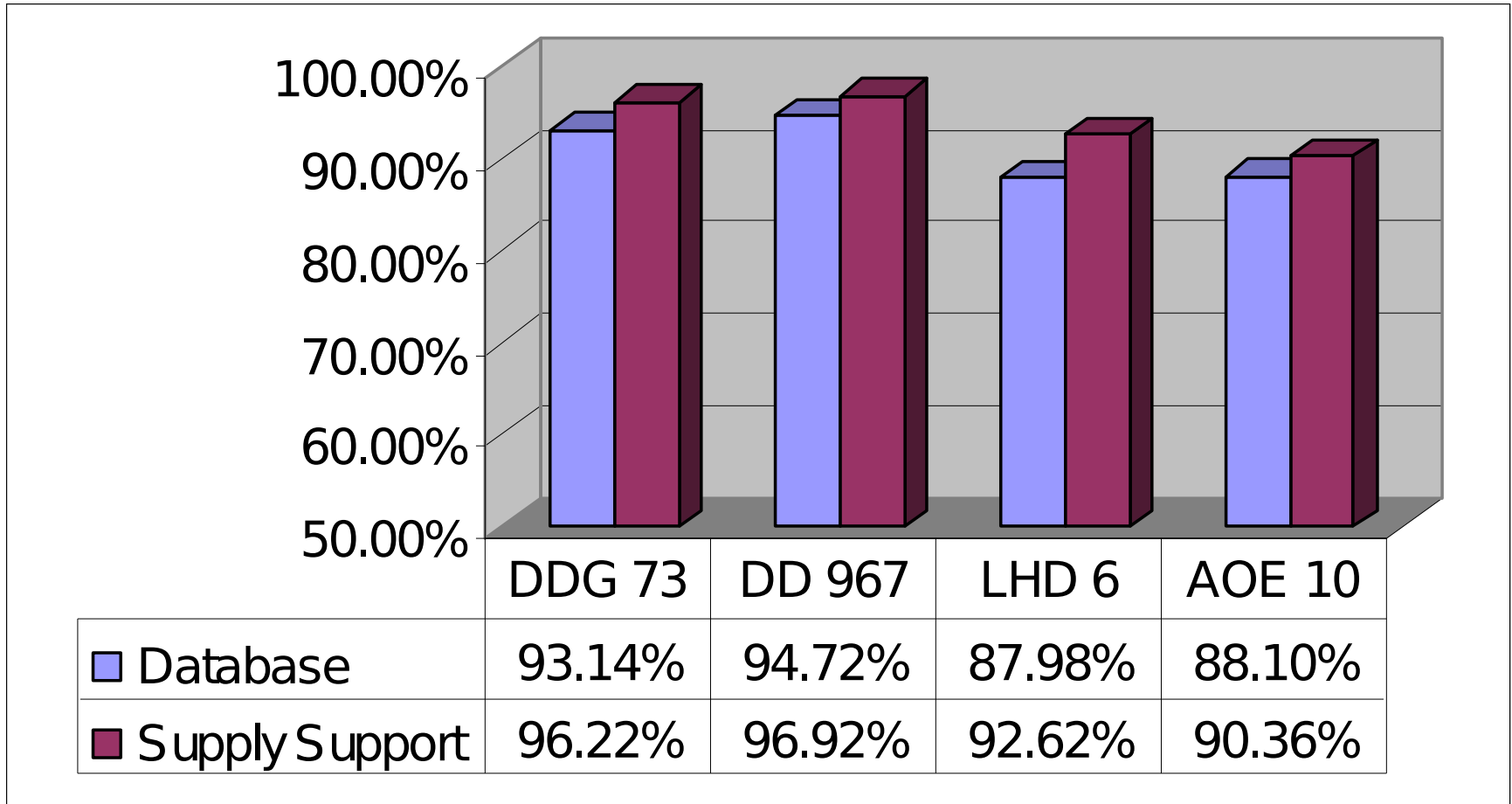


USS Enterprise, CVN 65, not shown because only electronics and ordnance equipment were audited  
Database accuracy goal of 95% for surface ships and 97% for submarines



# Stennis BG

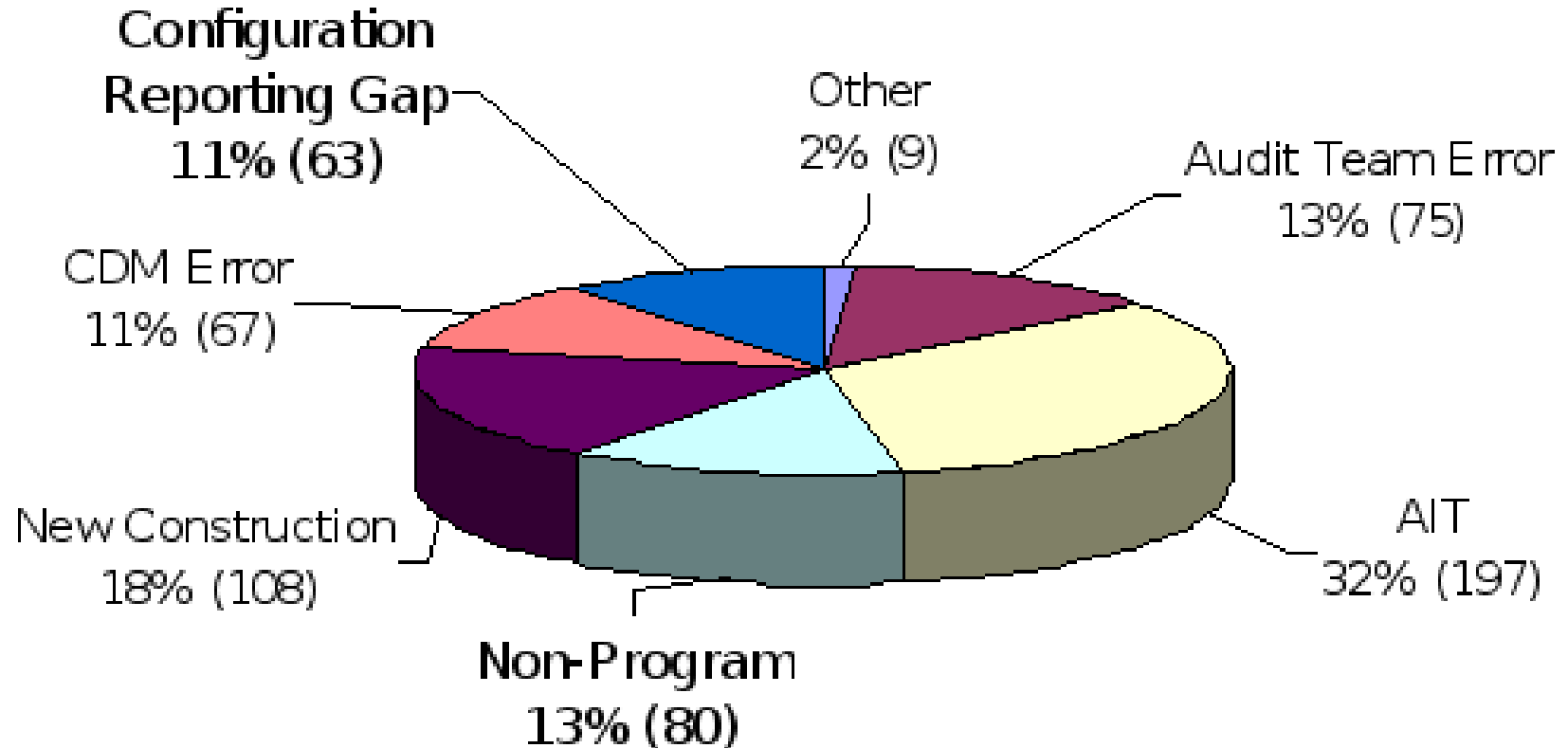
## Configuration Accuracy



Only four ships of the Stennis BG audited due to early deployment following 11 Sept.  
 Database accuracy goal of 95% for surface ships and 97% for submarines



# Enterprise BG Discrepancy Code Breakout



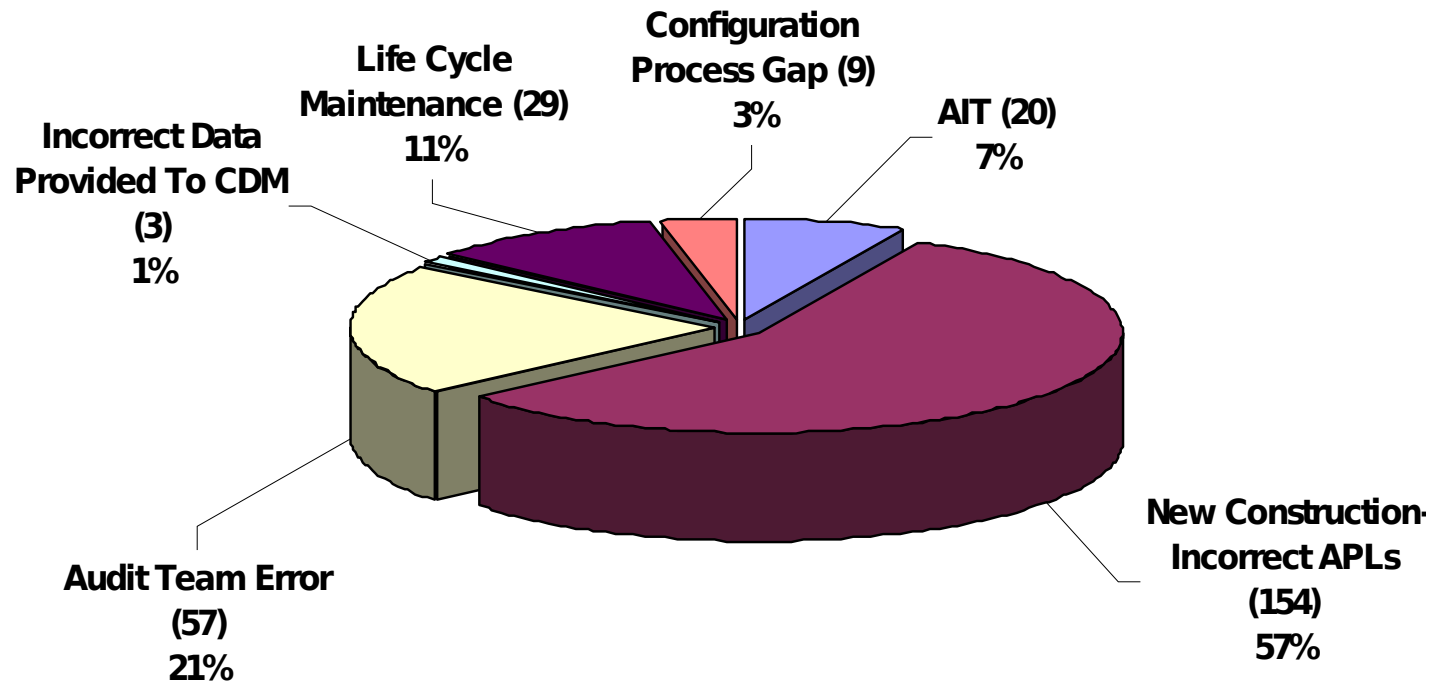
599 Total Type 2 Records

Break out based on CDM and ISEA responses



# Stennis BG Discrepancy Code Breakout

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272 Total Type 2 Records\*

Initial break out based on CDM responses

03/06/02

\* Does not include discrepancies for the LHD 6



# Methodology

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- For discrepancies in each reason category identify;
  - Activity responsible for reporting change
  - When the change occurred
  - Why the change didn't get properly recorded
- Trend results by;
  - Reason category
  - System
  - Installing activity
  - Ships (classes)
- Utilize trends to ID and remedy root causes with appropriate players





# Preliminary Trends

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- New Construction
  - AN/SYQ-7A was based on the DDG 72—the previous sister ship configuration
  - Shipbuilder bought SA-2112(V)1/STQ as Contractor Furnished Equipment
  - The AN/SRC-47 pre-planned data for the LHD 6 was never updated to reflect the upgraded system
- Standard Configuration Procedures not Followed on Some “Common” Equipment
  - Galley Equipment
  - Forklift Trucks



# Preliminary Trends (cont.)

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- Lack of Alteration Installation Traceability
  - Unable to Clearly Identify Which Ships, Systems and Equipments have had Alterations
  - Unable to Link Alteration Numbers with APLs
  - Many Alterations are Not Documented in CDMD-OA
- Example, secure communication equipment (TSEC)
  - Especially a problem on amphibious ships



# Reporting Out

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- Added additional discrepancy codes
  - More clearly describes root cause
  - Will be consistent in the future
- Reporting one accuracy number
  - reflects database errors not transactions



# Summary

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- Continue to conduct audits
  - Implement improvised candidate selection procedure
- Integrating random candidate generator into TOMCAT
- Need Fleet support for resolution of discrepancies



# Backup Slides



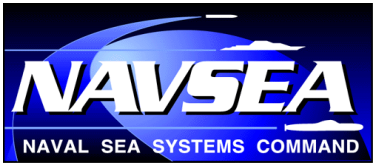
# Adds/Deletes/APL Changes

## Enterprise Battle

Ship	Evaluated Records	True Adds	True Deletes	APL Changes	Total Failures	Database Accuracy
AOE 8	559	16	10	5	31	94.45%
LHD 3	1384	5	13	14	32	97.69%
CG 58	784	7	11	3	21	97.32%
LPD 15	440	25	23	8	56	87.27%
LSD 50	920	41	18	13	72	92.17%
FFG 47	951	16	16	22	54	94.32%
DDG 74	1022	18	11	6	35	96.58%
DD 982	675	3	27	13	43	93.63%

## Stennis Battle Group

Ship	Evaluated Records	True Adds	True Deletes	APL Changes	Total Failures	Database Accuracy
AOE 10	1439	118	10	23	151	89.51%
LHD 6	2612	139	66	58	263	89.93%
DDG 73	852	11	5	22	38	95.54%
DD 967	892	11	3	17	31	96.52%

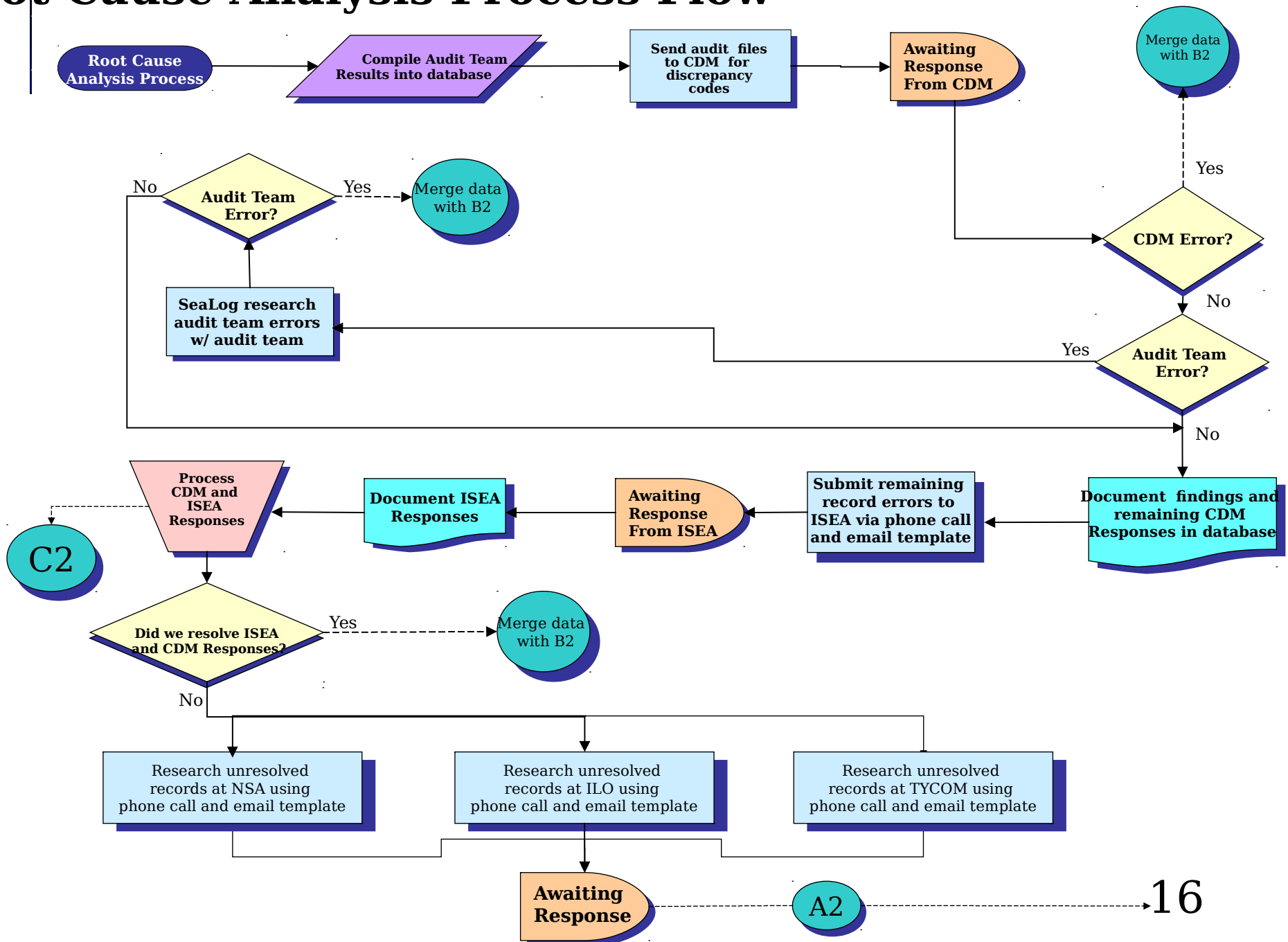


# Audit Fields

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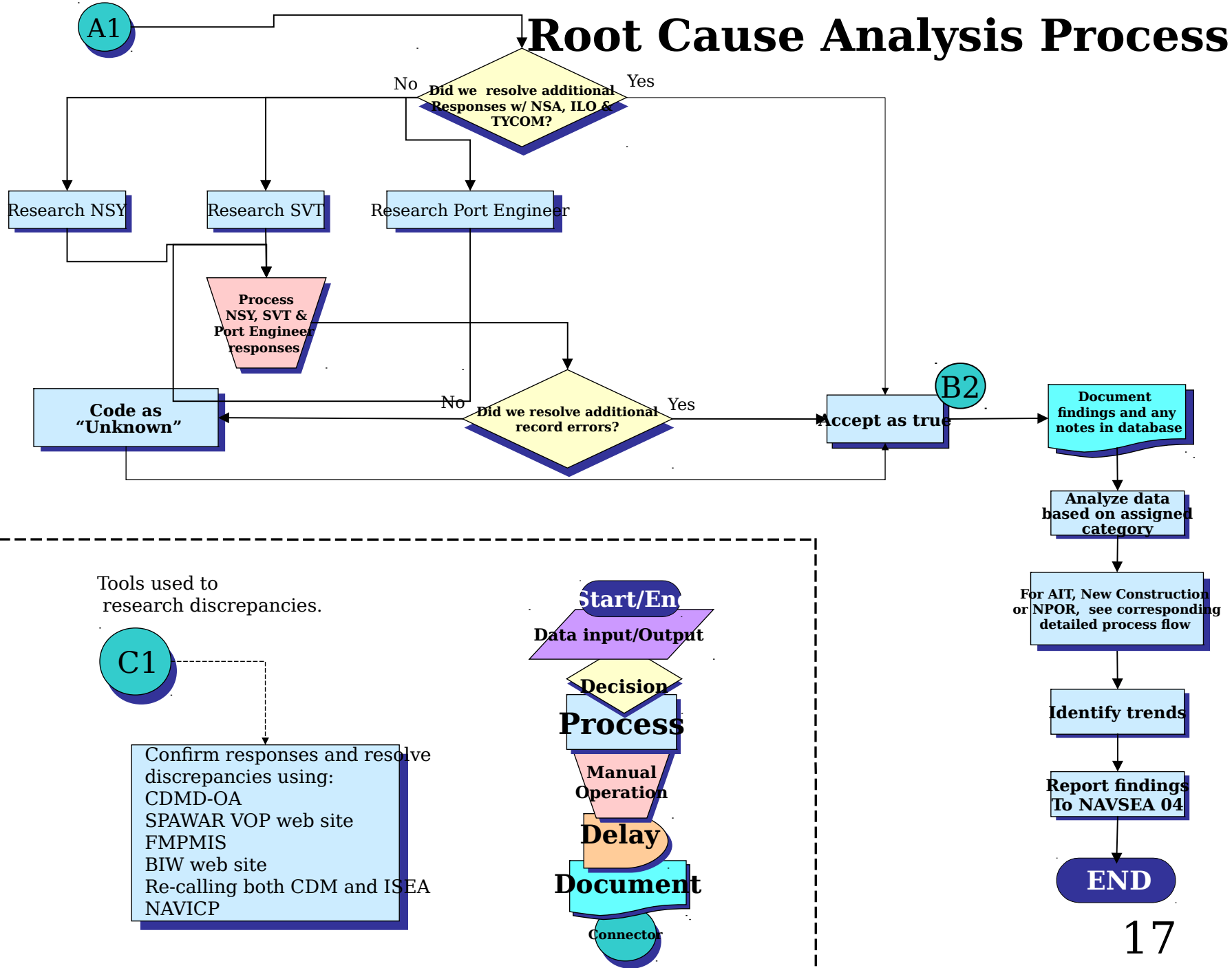
- Equipment Not in File (NIF) or Not on Board (NOB)
- Quantity
- Installation Status Code (ISC)

# Root Cause Analysis Process Flow



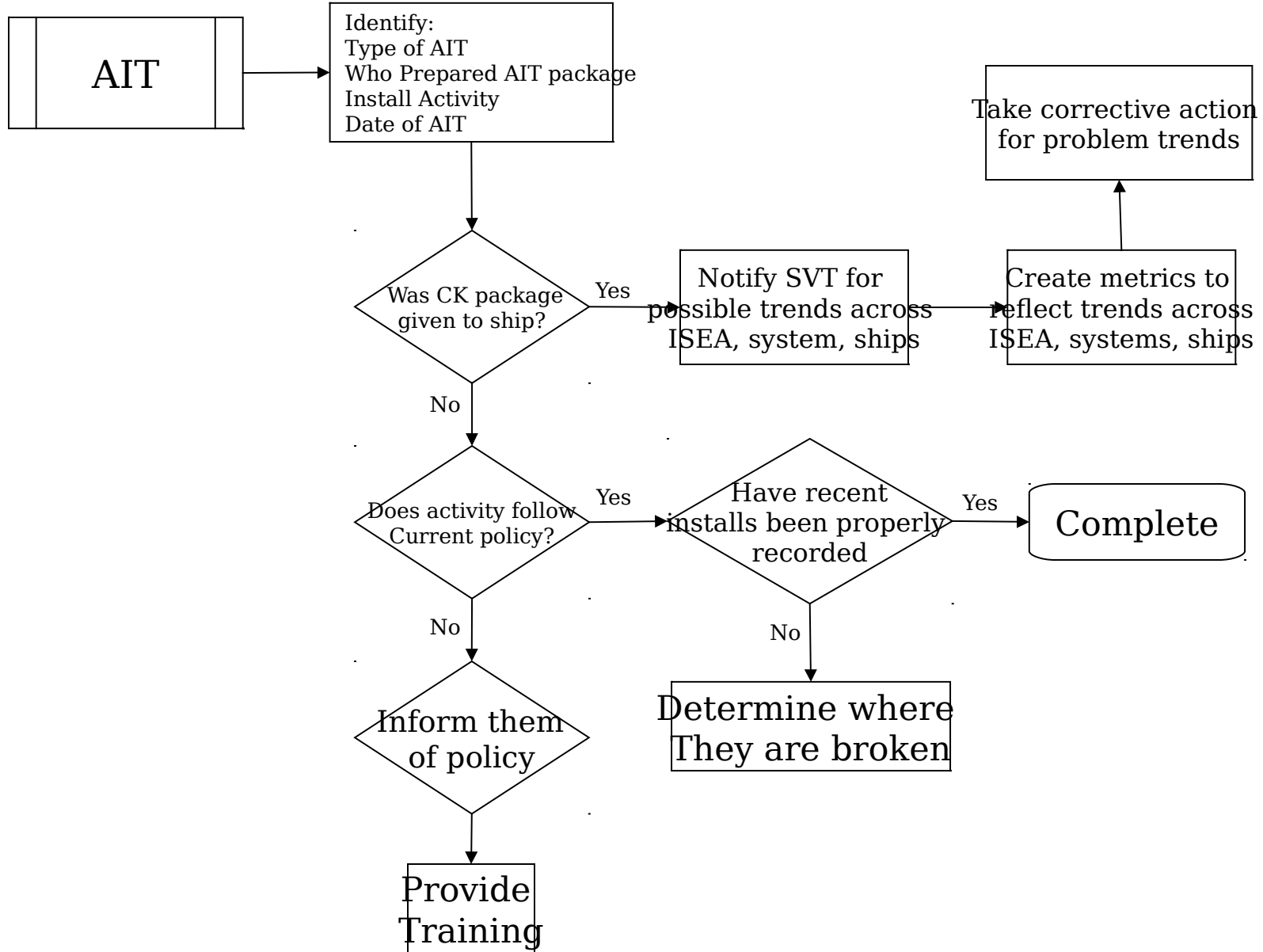


# Root Cause Analysis Process co



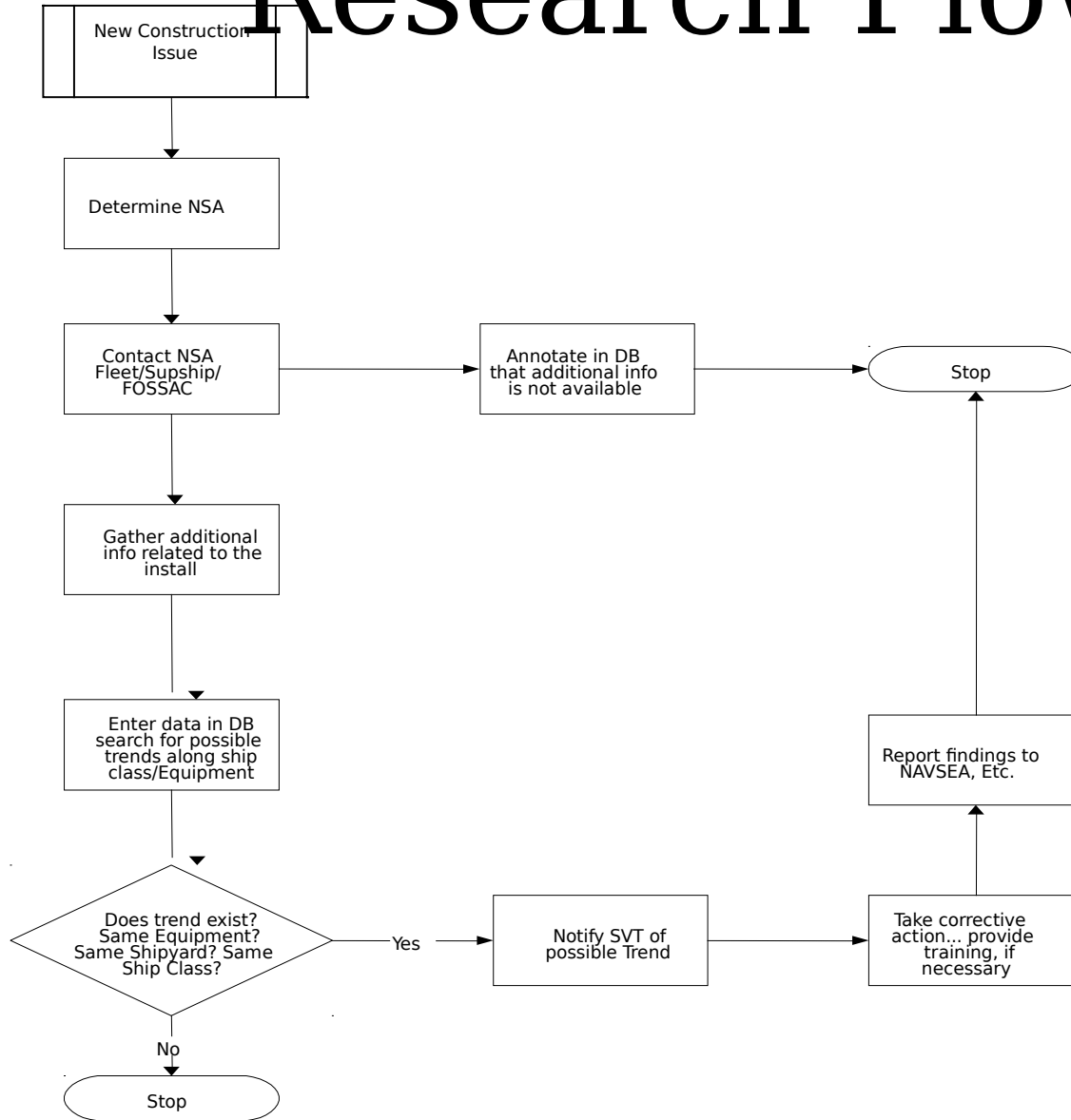


# AIT Research Flow



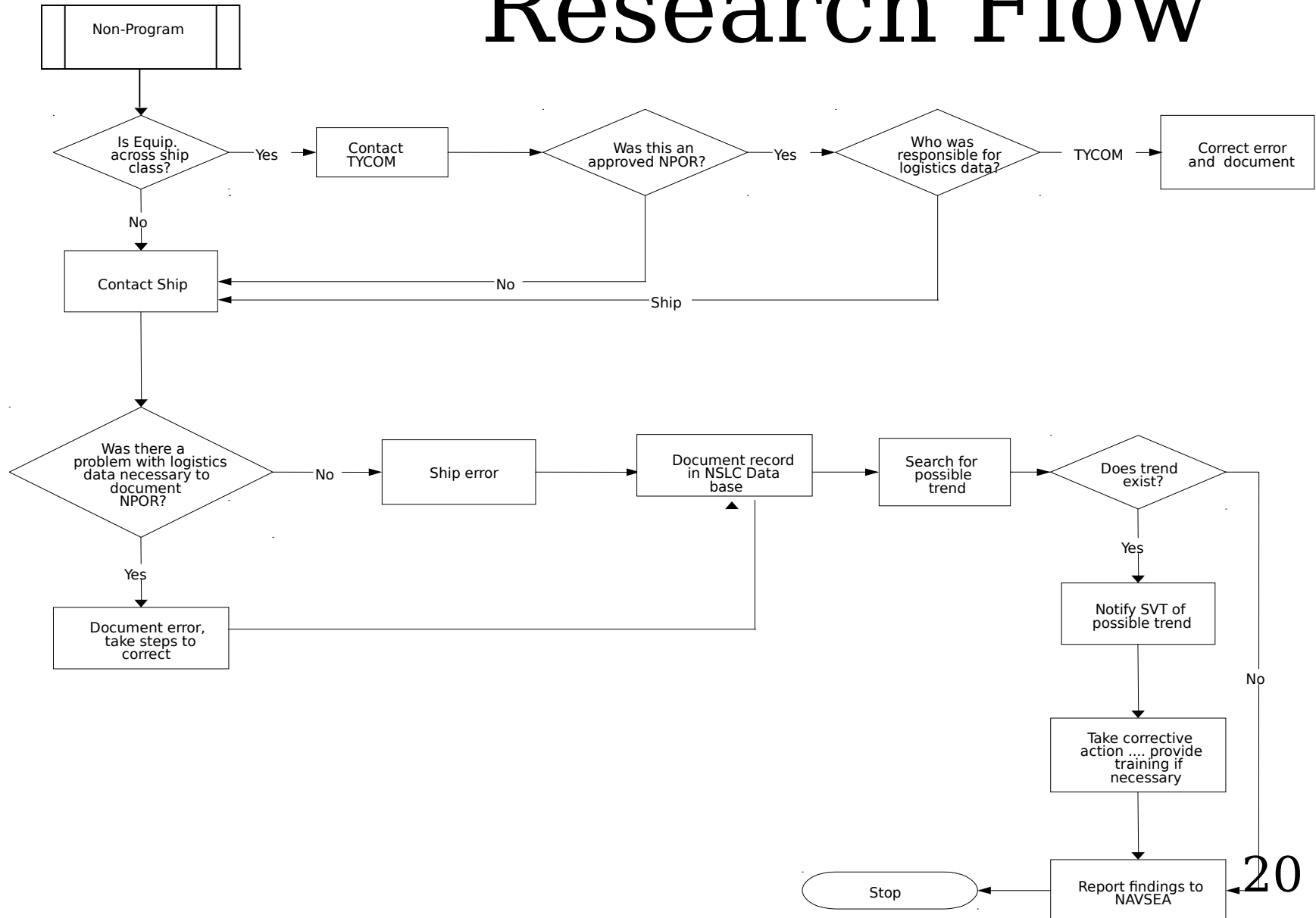


# New Construction Research Flow



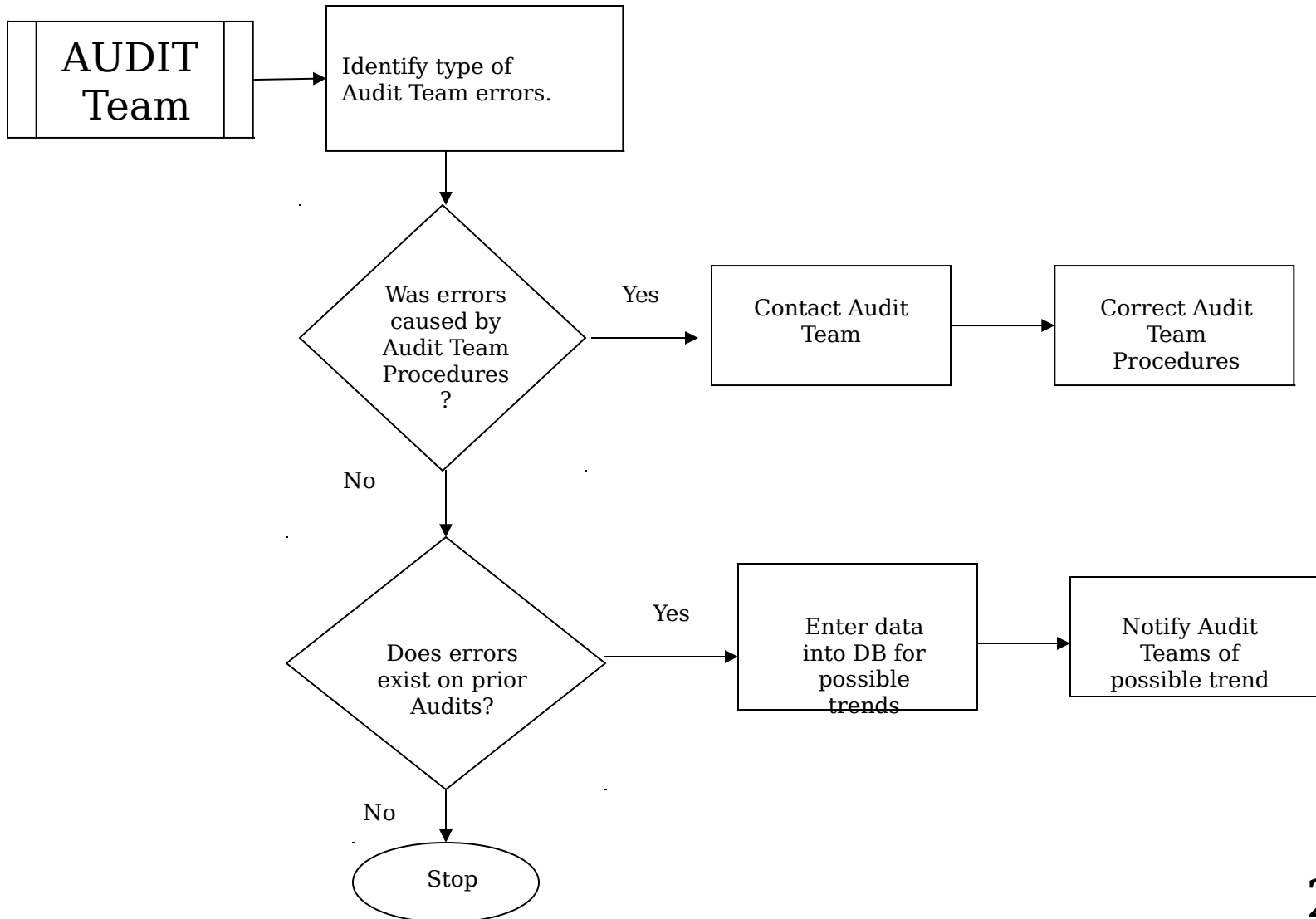


# Non-Program of Record Research Flow

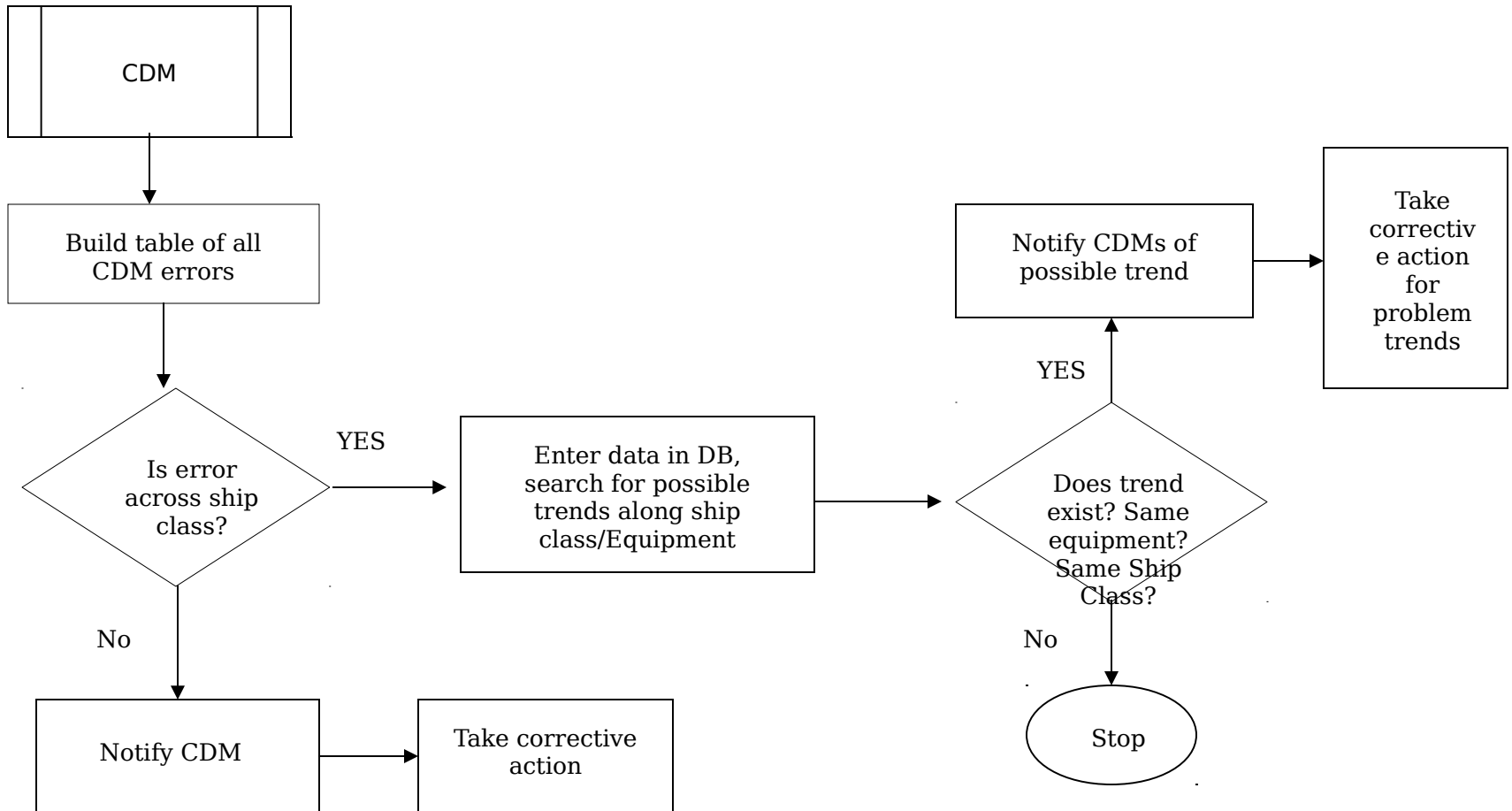




# Audit Team Research Flow

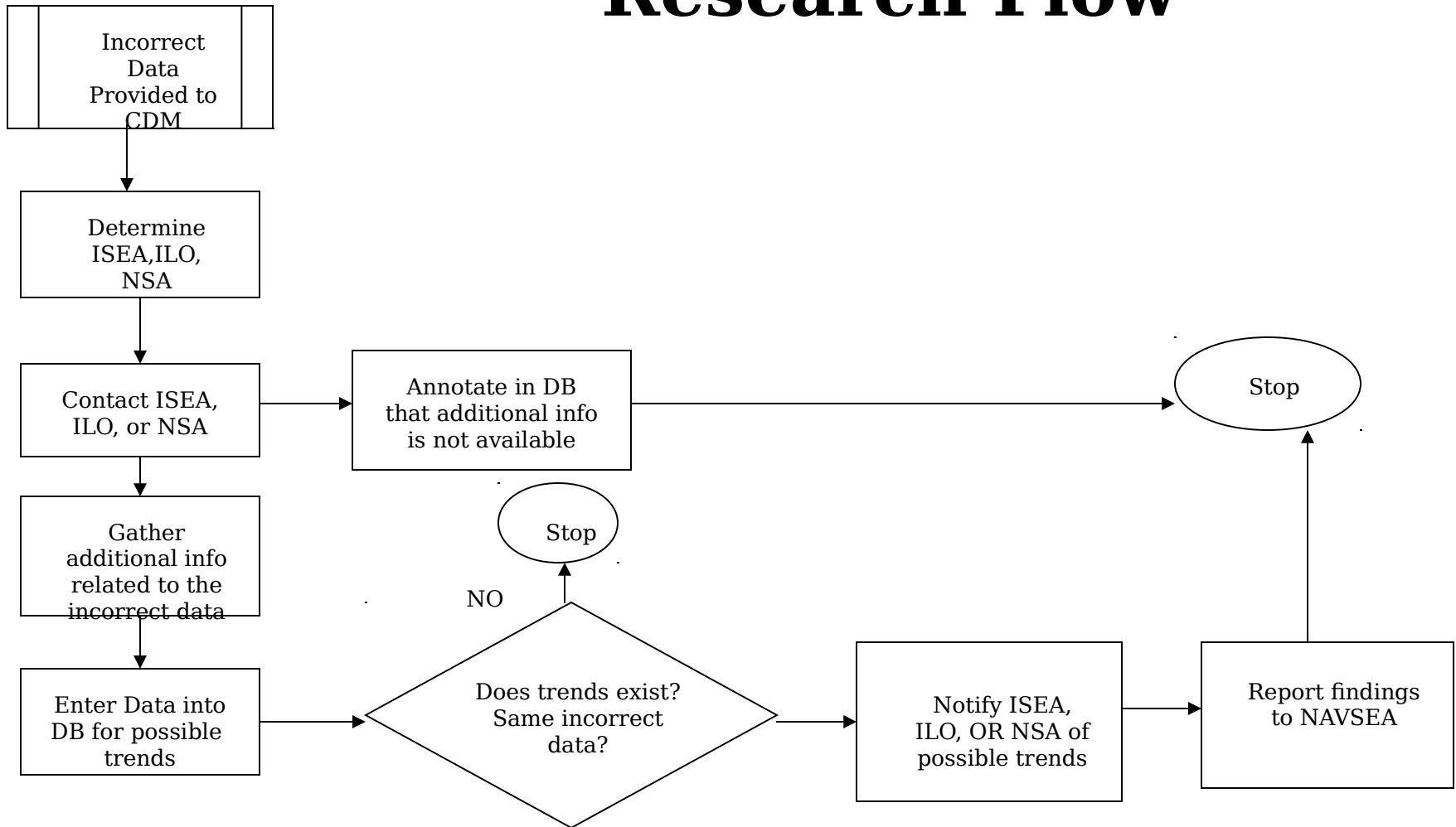


# CDM Research Flow





# Incorrect Data Provided to CDM (ISEA, ILO, NSA) Research Flow





# Life Cycle Maintenance

## (Shipboard, I, D Maintenance change APLs and CKs not submitted Research Flow)

